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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,444	07/18/2003	Troy Alexander Shahoumian	200308557-1	3558

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HEWLETT PACKARD COMPANY  
P O BOX 272400, 3404 E. HARMONY ROAD  
INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER
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STEVENS, THOMAS H

ART UNIT	PAPER NUMBER
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2121

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/623,444

Applicant(s)

SHAHOUIMIAN ET AL.

Examiner

Thomas H. Stevens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23 and 33 is/are allowed.
- 6) ☒ Claim(s) 1 and 24 is/are rejected.
- 7) ☒ Claim(s) 2-22 and 25-32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims 1-33 were examined.

### *Section I: Final Rejection*

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Raves (US Patent 6,378,119; hereafter Raves). Raves teaches a method and system for adaptive component placement (abstract).

Claim 1. A method of determining placement of components (abstract) in a rack (abstract) comprising the steps of: providing input variables (e.g., "reference numbers", column 2, lines 35-37) comprising a rack height (column 3, line 58), an identification of a set of components (e.g., "power supply component", column 2, line 65), a weight and a height for each component in the set of components (e.g., "power supply component", column 2, line 65) ; determining a placement of the components (figure 1) in the rack according to constraints by solving an optimization problem (figure 2, elements 48 and 52) using a computer (figure 2, element 52), the optimization problem using the rack height, the identification (figure 1, e.g., elements 21-26) of the set of components (e.g.,

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"power supply component", column 2, line 65), the height and weight ("weight-based algorithm", column 3, line 35) for each component (e.g., "power supply component", column 2, line 65) and the constraints (e.g., segments of rack that are 1.75 inches tall, column 2, lines 60-62); and evaluating the placement of the components (e.g., "power supply component", column 2, line 65) according at least one objective comprising at least a center of gravity objective (process of locating the center of gravity; columns 3 and 4, lines 65-67 and 1-6, respectively).

Claim 24. A computer readable memory (column 6, lines 20-23) comprising computer code for directing a computer to make a determination of placement of components in a rack (placement of optimum levels, column 8, lines 44-67), the determination of the placement of the components (figure 1) comprising the steps of: obtaining input variables e.g., "reference numbers", column 2, lines 35-37) comprising a rack height, (column 3, line 58) an identification (figure 1, e.g., elements 21-26) of a set of components (e.g., "power supply component", column 2, line 65), a weight and a height for each component in the set of components; determining a placement of the components (figure 1, e.g., elements 21-26) in the rack according to constraints by solving an optimization problem (figure 2, elements 48 and 52) using a computer, the optimization problem using the rack height, the identification of the set of components, the height, weight distribution ("weight-based algorithm", column 3, line 35) for each component and the constraints (e.g., segments of rack that are 1.75 inches tall, column

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2, lines 60-62); and evaluating the placement of the components according to an objective ("can determine an optimal rack configuration without comprising safety", column 2, lines 25-26).

***Section II: Allowable Subject Matter***

4. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).
5. Claims 2-22 and 25-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is an examiner's statement of reasons for allowance:
  - The claimed invention is a method for determining the placement of components of a rack.
  - The reference by Raves (US Patent 6,378,119) teaches most of the instant application but does not disclose a non-overlapping constraint which requires that each slot in the rack be occupied by no more than a single component.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

7. Claims 23 and 33 are deemed allowable.

### ***Section III: Response to Arguments***

#### ***Drawings***

8. Applicants are thanked for responding to this issue. Objection is withdrawn.

***112 2<sup>nd</sup>***

9. Applicants are thanked for responding to these issues. Rejections are withdrawn.

***103***

10. Applicants are thanked for responding to this issue. Rejection is withdrawn.

#### ***New Rejection (as applied to claims 1 and 24)***

11. Applicants' arguments, see pages 10-17, filed, 02/08/2007 with respect to the rejection(s) of claim(s) 1-33 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Raves*.

***Conclusion***

12. Applicants' amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715, Monday-Friday (7:00 am- 4:30 pm EST).

If attempts to reach the examiner by telephone are unsuccessful, please contact examiner's supervisor Mr. Anthony Knight 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Answers to questions regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) (toll-free (866-217-9197)).



Anthony Knight  
Supervisory Patent Examiner  
Tech Center 2100